

the elastomeric film between the necked spunbond webs. The resulting neck-bonded laminate 230 can be stretched in the cross direction due to the extendibility of the necked nonwoven webs. Upon relaxation, the laminate 230 will return substantially to its original manufactured configuration due to the retractive influence of the elastomeric film. Further details pertaining to the manufacture of neck-bonded laminates using a molten elastic film are provided in U.S. Patent 5,514,470 to Haffner et al., which is incorporated by reference.

Fig. 5 illustrates an alternative process 300 for making a neck-bonded laminate of the invention. In this process, a pre-formed extendible or elastic film is combined with a necked nonwoven web. An extendible film is one which can be stretched like an elastic film, but does not necessarily retract. The central region of the nonwoven web is exposed to a selectively higher necking tension or force, by selectively increasing the distance traveled by the central region between first and second nips.

Referring to Fig. 5, nonwoven web 12 (for example, a spunbond-meltblown spunbond laminate) is unwound from supply roll 301. Nonwoven web 12 is passed through a first nip 316, including nip rollers 314 and 318 turning at a first surface velocity; and a second nip 326, including nip rollers 324 and 328 turning at a second surface velocity which is higher than the first surface velocity. An S-roll system 319, including rollers 18 and 20 as illustrated in Figs. 3(a) and 3(b), is placed between the first nip 316 and second nip 326. As shown in Fig. 3(a), rollers 18 and 20 have profiled surfaces resulting in a larger diameter in the central portion than at